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FACTORS AFFECTING INDIVIDUAL HOUSING SATISFACTION: AN ANALYSIS OF A STRUCTURAL EQUALITY MODELING

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ABSTRACT

Individual housing satisfaction is a variable concept according to the relative meaning and importance attributed to the dwelling. It expresses a subjective feeling according to the perception and desires of the individuals. Housing satisfaction shows the extent to which the ideal residence that the owner or user lives with and the current residence that he / she lives with. In this study, the satisfaction of the residents of Erzincan center was investigated using many variables. Horizontal cut data obtained from 383 surveys conducted in 2018 with individuals residing in Erzincan center were analyzed by Structural Equation Modeling. Structural Equation Model results showed that the "Demographic Structure" variable had a positive low level effect ($\gamma = 0.19$; $t = 3.25$) on housing satisfaction. The "Housing Location" variable affects the satisfaction of the house positively and at a high level ($\gamma = 0.83$; $t = 13.93$). The variable "Housing Environment" has a positive and high level effect on housing satisfaction ($\gamma = 0.90$; $t = 10.69$). The "Housing Architecture" variable affects the housing satisfaction ($\gamma = 0.95$; $t = 14.02$) positively and at a very high level. Again, the "Housing Characteristics " variable affects the satisfaction of the house at a high level and positively ($\gamma = 0.90$; $t = 17.22$). There was no interaction between the variable "Socioeconomic Structure" and housing satisfaction.

Keywords: Housing Satisfaction, Housing Location. Housing Environment, Structural Equation Modeling, Erzincan
JEL Codes: J15, A7

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1. INTRODUCTION

Individual housing satisfaction varies according to the perceptions and wishes of individuals as a multi-dimensional concept in terms of meaning and importance attributed to the concept of housing. Housing is not only a place that meets the individual's housing needs, but it is a valuable commodity with many functions such as social relations, status, aesthetics, anticipation, investment and lifestyle. Housing satisfaction shows the extent to which the ideal residence that the owner or user lives with and the current residence he wants to live with (Galster, Hesser, & Garry, 1981). Satisfaction is a subjective situation assessment, and it is about the satisfaction of the home, the environment of the home, the benefits it provides from the home, its aesthetic taste and the pleasure it feels from the home (Francescato, 1998; Ge & Hokao, 2006). In housing satisfaction, the quality of the housing environment, the aesthetic appearance of the house and its surroundings, the presence and quality of the social and economic facilities around the housing, the distance of the residential area in which the house is located to the city, the existence and proximity of businesses and facilities that can meet daily needs, neighborhood relations, public transport and roads its prominence comes to the fore (Carvalho, George, & Anthony, 1997; Gür & Şenkal Sezer, 2018).

Housing is a constant need. Housing is the basic living space of individuals and the individual spends most of his daily life here. The individual is often involved in social life with his home. Housing is an emotional place where the psychological and social processes develop with the environment where the individual lives and with other individuals (Francescato, 1998; Kellekçi & Berköz, 2010). So housing is more than a shelter for many individuals. Housing holds a subjective and personal place in the life of the individual in connection with its social, psychological and cultural dimensions. More importantly, it is an area that affects the overall satisfaction of individuals in their lives. The residential environment is also the area where the social and physical connections of the person with the complex world are realized (Mortada, 2008). For these reasons, housing satisfaction, individuals' education, culture, income, demographic structure, social status and belief vary from country to country and even from city to city (Karaduman & Yılmaz, 2015; Karadağ, Gültekin, & Mutlu, 2019).

Environment is the total of external parameters that are outside the individual and have an impact on the individual. The individual senses and makes sense of the organs and the parameters coming from this environment. Again, as a concrete concept, it can be defined as environment, place, place, area (Niezabitowski, 1987). It refers to the natural, social and built area surrounding the individual. In other words, the environment expresses all of the elements that make up the living space outside the individual.

The housing environment refers to the physical, sociological, psychological and economic structure and relationships of the place in which the house are located. The residential environment affects the interaction of individuals with other individuals, the use and perception of furniture and space, and hence the life satisfaction of individuals. The physical conditions and facilities of the residential space, namely the common usage areas such as parks, gardens, green areas and sports areas, common activity areas such as service, trade, cultural, religious facilities, club, union and professional associations create common use and benefit for individuals. It provides the emergence and development of neighborhood and social relations. In this nature, housing significantly affects the quality of life and satisfaction.

For these reasons, the house is not only with its architectural and physical features; it is also a structure that should be considered with all the natural, social, physical and psychological environment surrounding the dwelling. Winston Churchill's statement that " We shape our buildings; thereafter they shape us." shows the importance of the house and its environment in the life of the individual (Roth, 2015). Social, cultural and economic factors encompass the dwelling and its surroundings, and also affect the behavior and satisfaction of individuals who live in dwellings. The physical, social and cultural features of the housing and its surroundings are considered as important indicators of the quality of life and individual housing satisfaction. In other words, a peaceful natural environment, a social environment where I have reliable and friendly relations, and a physical environment built with aesthetics increase the quality of life and satisfaction.

"What is satisfaction or housing satisfaction and how can it be measured?" There may be many answers to the question. Life satisfaction or satisfaction; It is expressed as the general assessment of the quality of life according to the criteria set by the individual (Saygılı, Onay, & Ayhan, 2017). Housing satisfaction, on the other hand, expresses the differences between the housing in which households live and the housing they want to live in. In other words, the closer the real dwelling is to the ideal dwelling, the more satisfaction there will be (Galster, Hesser, & Garry, 1981). Satisfaction is a subjective condition and an individual's emotional response to her/his home and environment (Ge & Hokao, 2006).

Housing satisfaction has been the subject of many empirical studies using different variables. There are studies at home and abroad, which consider individuals' physical structure and social relationships as the basic variable with their demographic characteristics such as age, gender, income, marital status, number of children (Francescato, Weidemann, & Anderson, 1974; Aigbavboa & Thwala, 2018; Galster, 1987). Again, in the studies on the relationship between the environmental and physical properties of the house, its usage areas, individual and cultural characteristics, and housing satisfaction, it was determined that the quality of the house and the environment was effective on individual housing satisfaction (Clark & Onaka, 1983; Tognoli, 1987; Yıldırım, Akalın, Yeşilkavak, & Hidayetoğlu, 2007; Türkoğlu, 1997). In the studies that measure the satisfaction of the quality of the house and its

surroundings with individuals, it has been observed that the location of the house is important for the ease of access to the business areas such as various shopping malls, recreation areas, the city center and individuals' workplaces, and the satisfaction of individuals from the housing and its surroundings (Michelson, 1977; Loo, 1986; Özgür, 2009).

This study focuses on the satisfaction of individuals living in Erzincan city center from their residences. With a holistic approach, the relationship between the demographic characteristics of the individuals, the environmental quality of the house, the area of use and architecture of the house and the satisfaction of the house were investigated. The study is limited to Erzincan city center. Erzincan is a modern city built by using horizontal architecture after the 1992 earthquake. The findings to be obtained are important in terms of new management and business understanding that focuses on individual satisfaction.

2. MATERIAL AND METHOD

2.1. Materiel

Horizontal cross-section data obtained from 383 surveys conducted with individuals residing in Erzincan city center constitute the main material of the study for testing and analysis. The analysis of the study was carried out with LISREL 8.72 and SPSS 21 package programs.

2.2. Method

Determination of Sample Size

The universe of study consists of 231.511 individuals residing in the city center of Erzincan. According to the Random Sampling Method, the sample size is determined by the formula below (Yamane, 1976).

$$n = \frac{\mathrm{N.P.Q.Z^2}}{\mathrm{(N-1).d^2 + P.Q.Z^2}}$$

n = Sample volume, N = Total number of individuals belonging to the sampling frame, P = Satisfied with their residences, Q = Unsatisfied with their residences (1-P), Z =% (1-α) Z test value, α = significance level, d = is the margin of error (tolerance). Z Confidence coefficient (95% confidence coefficient, 1.96 taken) The sample of those who are satisfied with their residences and dissatisfied to work with the largest sample is taken as 0.5 and can represent the mass with a 5% significance level of 95% size was calculated as 383.

2.3. Theoretical Framework

Structural Equation Modeling

Structural equation modeling is frequently used in different disciplines to test the relationships between observed and latent variables to measure a certain theoretical relationship (Bentler & Yuan, 1999; Cheung & Rensvold, 2002; Jöreskog & Sörbom, 1993). The fact that the structural equation models take into account the measurement errors and deficiencies of the variables observed differently

than the traditional econometric measurement methods enables it to be used intensively in many different areas. Another reason is that it can show indirect and direct effects between variables and allows for multivariate model development, prediction and testing (Hershberger, 2003; Lomax & Schumacker, 2004). Structural Equation Modeling clearly takes into account measurement errors when analyzing the data statistically. Structural Equation Modeling also allows researchers to develop, predict and test multivariate complex models and takes into account the direct and indirect effects of variables in the given model.

Mathematical Structure of Structural Equation Modeling

The linear equations created for the observed variables belonging to the independent latent variable are as follows:

$\boldsymbol{x = \Lambda^{x}.\xi + \sigma}$

x: Matrix of observed variables,

$\boldsymbol{\Lambda^{x}}$**:** Coefficients matrix of the measured independent variables affected by independent latent variables,

ξ : Independent latent variable,

σ: It is the error vector of the observed variables belonging to the independent latent variable.

Linear equations created for observed variables of dependent latent variables are as follows:

$\boldsymbol{y = \Lambda^{y}.\eta + \varepsilon}$

y: The observed variables vector of dependent latent variables,

$\boldsymbol{\Lambda^{y}}$**:** The coefficients matrix of the observed variables belonging to the dependent latent variable,

η : Dependent latent variable,

ε: It is the error vector of the observed variables belonging to dependent latent variables.

Linear equations created for the structural model are as follows;

$\boldsymbol{\eta = \Gamma.\xi + B.\eta + \zeta}$

Γ: Bağımsız gizil değişkenlerin etkilediği bağımlı gizil değişkenlerin regresyon katsayıları matrisi,

B: The regression coefficient matrix between dependent latent variables affected by independent latent variables,

ζ: An error matrix of dependent latent variables that is not affected by independent latent variables.

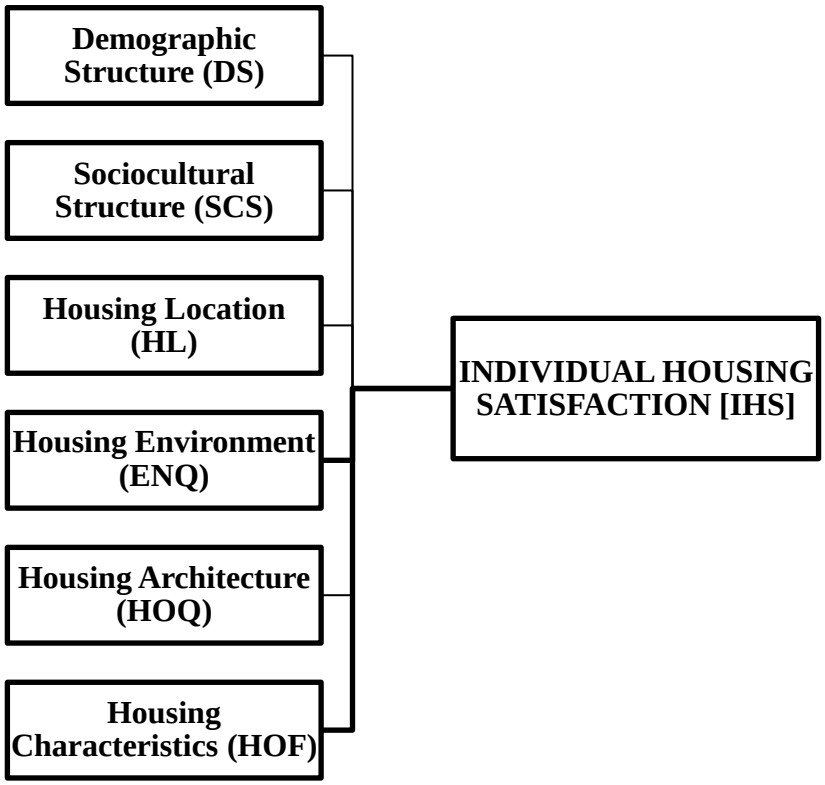
Model Assumptions

1. The observed variables have a multivariate normal distribution,
2. The latent variables have a multivariate normal distribution,
3. There are linear relationships between latent variables,
4. There are linear relationships between observed and latent variables,
5. There are contradictory values,
6. Error terms are uncorrelated,

7. There are no multiple linear connection problems,
8. It is assumed that sufficient sample size is available.

The theoretical model aiming at the satisfaction of individuals is shown in Figure 1 below.

Figure 1: Housing satisfaction theoretical model



2.4. The Secret Variables of the Model

Individual Housing Satisfaction (External Dependent Variable)

Satisfaction expresses a subjective situation and is a relative variable. It is a situation that can change according to the individual's time, changes in his life, changing conditions and motivation. In terms of housing satisfaction, individual satisfaction of a house can change according to the existence of different conditions. First of all, the value added to the life of the individual and the residential environment is important. Housing gives a feeling of satisfaction to the extent that it meets the individual's expectations (Francescato, Weidemann, & Anderson, 1987). Satisfaction is emotional and feelings of happiness towards the living space (Weidemann & Anderson, 1985).

It is argued that individuals' thoughts and feelings about their own lives are very important in evaluating quality of life or satisfaction. It is the right action to evaluate individuals' thoughts about health, employment, housing and other aspects of their lives with objective data and to measure satisfaction, but it is not sufficient alone. (Campbell & Converse, 1972). Comprehensive assessment of quality of life (satisfaction) requires data describing the subjective life conditions of individuals and

how they evaluate their lives subjectively. Life satisfaction is defined as the satisfaction judgment from life as a whole (Argyle, 1987). . Therefore, while preparing individual housing satisfaction questions, the scale of "subjective well-being" was taken into consideration in the literature (Diener, 1984). The housing satisfaction scale questions below are in a five-point likert structure.

S1 - Generally satisfied with the house I live in.

S2 - I am satisfied with the space and surroundings of the dwelling.

S3 - I am satisfied with the interior and exterior architecture of the residence

Demographic Structure

There are findings that the basic demographic and individual characteristics of the families residing in the dwelling are determinant in the satisfaction of the dwelling. It was observed that the age, gender, marital status, family size and number of children affect the command satisfaction (Varady & Preiser, 1998; Varady, Walker, & Wang, 2001; Lawrence, 1987). The demographic structure variable in Structural Equation Modeling consists of the following factors.

Age - Age of the participant

Sex - Sex of the participant

Edu - Training of the participant

Ms - Marital status of the participant

Chihd - Number of children of the participant

Socioeconomic Structure

It is known that the socio-economic structure of the family residing in the dwelling affects the satisfaction of the dwelling. Individuals' income status, home ownership, housing size and household size affect life satisfaction and housing satisfaction (Lu, 1999; Theodori, 2001). The observed variables of the socioeconomic structure variable are listed below.

Inc - Participant's income

Job - Participant's profession

Hbuy - How to buy the property

Hi - Household size of the participant

Hs - Physical size of the house

Housing Location

The location of the house is important in terms of housing satisfaction with its advantages and disadvantages. It is desirable that the residential building is close to the city center, to individuals' workplaces. This situation, which is expressed as accessibility, expresses the ability to reach service and business areas easily and in a short time (Özgür, 2009; Şekeroğlu, 2018; Michelson, 1977). The housing location scale questions below are in a five-point Likert structure.

HP1 - Accessibility to the shopping center is important.

HP2 - Accessibility to the center is important.

HP3 - Job accessibility is important.

Housing Environment

Houses are places where physical, spatial, social, cultural, cognitive and behavioral phenomena intersect (Kellekçi & Berköz, 2010). The residential environment is a broad concept that includes the dwelling, other dwellings and facilities in the area where the dwelling is built, social and neighborhood relations that develop in that plane. The residential environment covers all facilities, businesses and areas where residents meet the needs of residents in a particular space. It is possible to examine the residential environment in two dimensions: physical and social (Şekeroğlu, 2018). Physical environment; It refers to the physical possibilities that meet the individual needs in the residential area. The social environment is; It covers the socioeconomic status, cultural values, customs and traditions, lifestyles and neighborhood relations of individuals and families in the current environment (Lawrence, 1987). The housing environment scale questions below are in a five-point Likert structure.

EQ1 - It is important to have recreation areas near the residence.

EQ2 - It is important to have basic education areas close to the residence in primary, secondary and high schools.

EQ3 - It is important to have a parking lot around the residence.

EQ4 - Navigation areas around the residence are important.

EQ5 - It is important to have sports fields around the residence.

EQ6 - It is important to have a health center and hospital close to the residence.

EQ7 - It is important to have public transport stops.

EQ8 - It is important to have a place of worship around the command.

EQ9 - In general, I pay attention to social and neighborhood relations.

EQ10 - I prefer people living in the residential area to be similar in terms of income level, education and origin.

EQ11 - I do not feel uncomfortable with neighbors of different ethnicities, beliefs or philosophical ideas.

Housing Architecture

The services and facilities provided by the residents are an important factor in housing satisfaction. The elevator, car park, cellar and warehouse, garden and security system of the dwelling are the factors that increase the satisfaction of the dwelling (Sönmez, 2010). Satisfaction is related to planned settlement and the possibilities provided by the user. External use of the dwelling as well as internal use increases the satisfaction of individuals. Social facilities, children's playgrounds, recreation areas, walking tracks, sports fields, firewalls and all factors that increase the quality of the residential

environment in the residential area also increase satisfaction (Michelson, 1977; Savasdisara, 1988; Kellekçi & Berköz, 2010). The housing architecture scale questions below are in a five-point likert structure.

HQ1 - Landscape matters.

HQ2 - Parking garage is important.

HQ3 - Disabled entrance and elevator are important.

HQ4 - The quality of the building and decoration material is important.

HQ5 - Children's playground, security, garden wall, etc. It is important.

Housing Characteristics

As a closed space where family members live together, the residence should be capable of meeting the needs of family members with its physical features (Şekeroğlu, 2018). Physical properties of the house; especially its usefulness and width affect the satisfaction of the house. The size, number of rooms, the size of the kitchen and balcony, the width of the hall, the number of bathrooms, the presence of areas such as the cellar and warehouse are effective in satisfaction (Weidemann & Anderson, 1985; Loo, 1986; Lu, 1999). The cultural values, beliefs, worldviews, lifestyles of families residing in the dwelling affect their needs and desires. However, although housing satisfaction varies between individuals, it is the common factor that increases satisfaction in harmony between the current living and the desired ideal housing (Lu, 1999). The housing charecteristics scale questions below are in a five-point likert structure.

HF1 - Large kitchen is important.

HF2 - Wide balcony is important.

HF3 - Large hall is important.

HF4 - Parent bathroom is important.

HF5 - Dressing room is important.

HF6 - Large bathroom is important.

HF7 - Additional options such as cellar, storage, basement and shelter are important.

3. FINDINGS AND DISCUSSION

3.1. Demographic and Socioeconomic Findings

Erzincan is one of the small and non-crowded cities of the Eastern Anatolia region. Demographic and sociocultural characteristics of the individuals surveyed are given below. The demographic characteristics of the participants are given in Table 1..

Table 1. The general demographic structure of the survey participants

Sex	n (Frekans)	Oran %
Women	197	51.4
Men	186	48.6
Age		
25-29	62	16.2
30-35	64	16.7
36-45	83	21.7
46-60	158	41.2
61 and above	16	4.2
Education		
Primary school	65	17
Middle School	64	16.7
High school	88	22.9
Associate degree	44	11.5
License	103	26.9
Graduate	19	5
Marital status		
The married	321	84
Single	62	16

Source: Original calculation

The age of the individual is an important factor in housing satisfaction. There are individuals from all age groups in the population. Percentage distribution of household heads by age groups is given in Table 1. 41.2% of the participants in the survey are in the 46-60 age group, which is the middle age group and has a higher rate compared to other age groups. When the education levels of the participants are examined, 26.9% are graduates, 23% are high school and 17% are primary school graduates. When the marital status of the participants is observed, the majority (84%) are married.

3.2. Structural Equation Modeling Analysis

Path and confirmatory factor analysis

Path analysis uses multiple regression analysis techniques for causal modeling through observed variables (Raykov & Marcoulides, 2006; Bordens & Abbott, 2011). Confirmatory Factor Analysis (CFA), also known as the measurement model, is used to test the relationships between observed variables obtained through questionnaires in the model and latent variables (theoretical structure or structures) that are considered to be measured using these observed variables (Wetson & Gore Jr, 2006). Confirmatory Factor Analysis (CFA) models act from a theoretical structure and try to explain the relationships between the parameters that exist in the theoretical structure with the observed variables (Schreiber, Stage, King, Nora, & Barlow, 2006; Mulaik, 2009). Before the measurement model was created, the reliability test of the observed variables in the scales, namely Cronbach's Alpha Coefficient, average and standard deviation were calculated using the SPSS 22 package program. After confirmatory

factor analysis, standardized factor load values and t values were calculated. These values related to the observed variables in the model are shown collectively in Table 2.

Table 2. Statistics and CFA results regarding observed variables

Observed Variables	Mean	Standard deviation	*t* value	Standardized Factor values	Cronbach's Alpha value
Individual Housing Satisfaction					
S1	4.20	1.090	11.85	0.59	0.863
S2	4.19	0.995	15.57	0.75	0.861
S3	3.14	1.202	3.76	0.19	0.870
Demographic structure					
Age	2.99	1.187	11.66	0.58	0.872
Sex	0.48	0.500	3.05	0.16	0.872
Edu	3.31	1.543	-9.45	-0.48	0.880
Ms	0.84	0.376	11.57	0.58	0.870
Child	2.25	1.383	21.77	0.99	0.871
Socioeconomic Structure					
Inc	2.47	0.990	3.34	0.21	0.874
Job	4.84	2.702	**-0.82**	-0.05	0.893
Hbuy	2.41	1.562	2.14	0.13	0.879
Hi	4.52	1.523	-7.12	-083	0.875
Hs	1.94	0.868	3.91	0.25	0.871
Housing Location					
HP1	3.86	1.153	16.68	0.75	0.862
HP2	4.22	1.058	21.50	0.89	0.860
HP3	4.25	1.074	21.60	0.89	0.860
Housing Environment					
EQ1	3.68	1.178	11.59	0.56	0.864
EQ2	4.23	1.018	17.05	0.76	0.862
EQ3	3.68	1.115	11.51	0.56	0.863
EQ4	3.86	1.056	16.86	0.75	0.861
EQ5	3.70	1.084	13.16	0.62	0.863
EQ6	4.24	1.054	19.58	0.83	0.860
EQ7	4.22	1.050	18.76	0.81	0.860
EQ8	4.03	1.106	15.04	0.69	0.861
EQ9	4.19	1.083	15.91	0.72	.861
EQ10	2.27	1.233	-8.61	-0.45	.883
EQ11	3.73	1.221	7.95	0.40	.866
Housing Architecture					
HQ1	4.09	1.013	14.91	0.69	.862
HQ2	3.64	1.158	7.34	0.38	.866
HQ3	4.22	1.044	18.66	0.81	.860
HQ4	4.33	.929	21.06	0.87	.861
HQ5	4.22	1.020	18.79	0.81	.861
Housing Characteristics					
HF1	4.26	0.966	19.52	0.84	.861
HF2	4.23	0.998	19.27	0.83	.861
HF3	4.19	0.974	18.96	0.82	.862
HF4	3.89	1.106	11.28	0.56	.864
HF5	3.62	1.231	10.63	0.53	.864

HF6	4.09	1.055	13.39	0.64	.863
HF7	4.06	1.043	13.15	0.63	.863
Chi-Square = 2206.46		df = 681	P-value = 0.00000		RMSEA = 0.077

Source: Original calculations

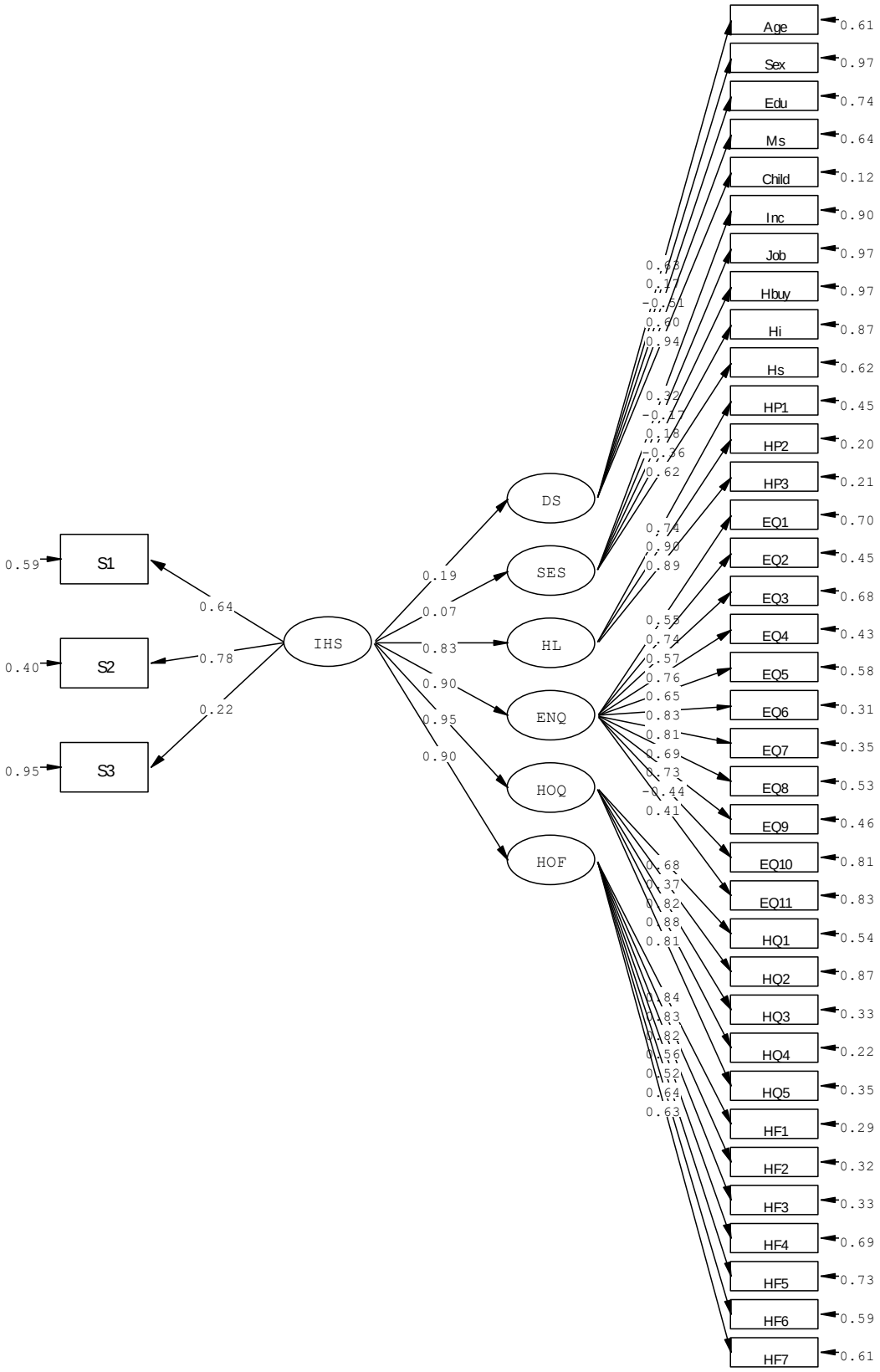
Among the observed variables in the model, "Job - Participant's profession" t value was determined as -0.82. This t value (-082) was found to be statistically insignificant within 95% confidence limits because it is less than ± 1.96. Since t values of other observed variables in the model are greater than ± 1.96, it was found statistically significant at 5% significance level.

Chi-square / degree of freedom (X^2 / DF), p value and RMSEA (Root-mean-square error approximation) values were examined as the measurement criteria used to evaluate the compatibility between the data and the model. For the model, the X^2 / DF value was calculated as 3.24. This value is among the acceptable values of five and less than five. Likewise, the RMSEA value was found to be (0.077). This value is within the acceptable values of 0.10 and lower. Since the model takes p <0.0000 value, it is statistically significant at 5% significance level. Cronbach's Alpha values of the observed variables in the model are above 0.800 and indicate that the scales are of high reliability.

Structural Model

The structural model shows explanatory relationships between latent variables (Raykov & Marcoulides, 2006). In other words, the structural model is a model used to test the relationships between latent variables (Wetson & Gore Jr, 2006). Structural equation modeling includes both observed and latent variables, and latent variables are defined by observed variables. The fact that it contains dependent and independent variables defines the canonical correlation direction and the causal relationships between the variables constitutes the direction of regression analysis (Tabachnick & Fidell, L.S., 2007; Kahn, 2006). Standardized values (regression values) are given in the structural equation model shown in Figure 2 below. The model shows the structural relationships between satisfaction with the demographic, socioeconomic, residential environment, residential architecture and properties of the residence.

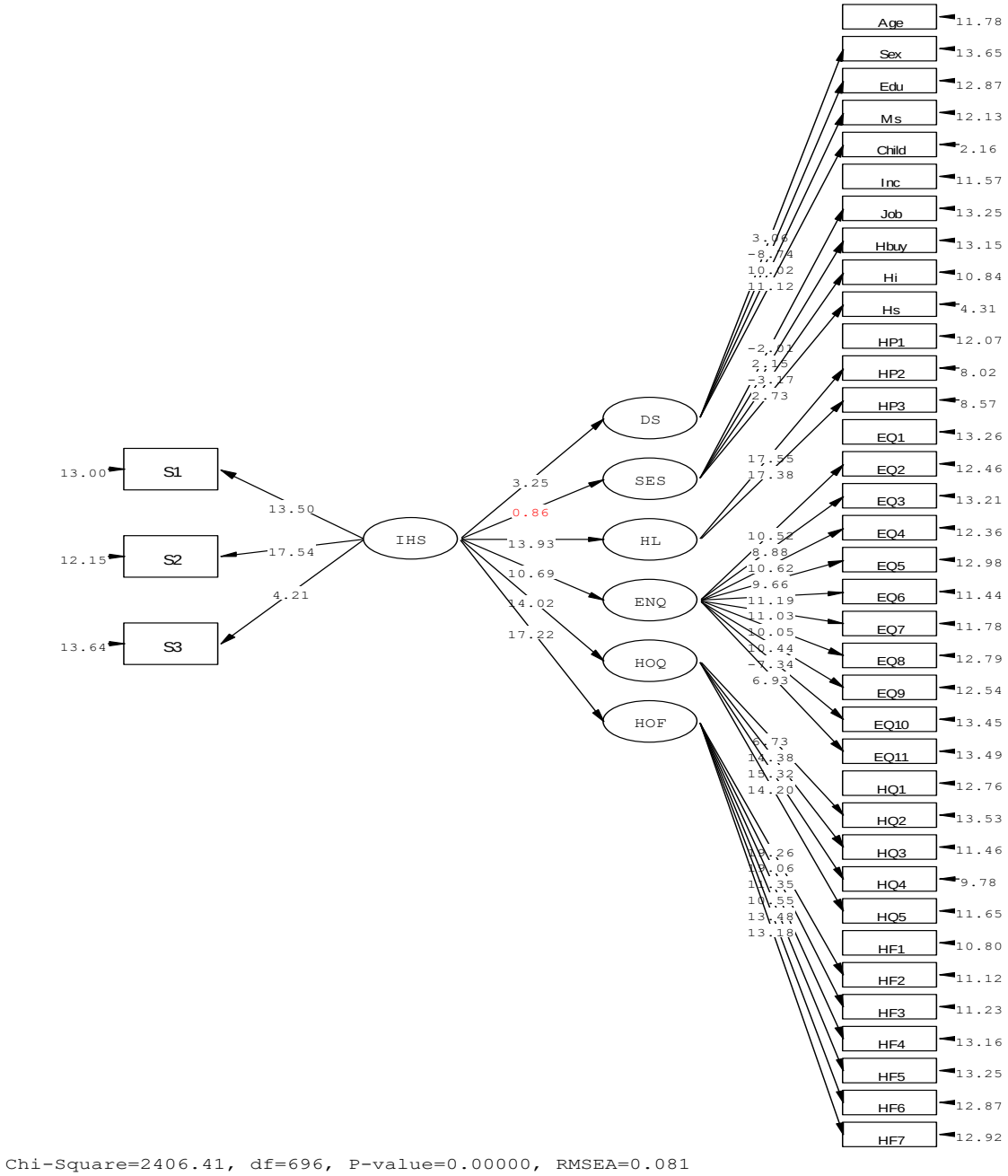
Figure 2. Housing characteristics and individual housing satisfaction structural model and regretion values



. Chi-Square=2406.41, df=696, P-value=0.00000, RMSEA=0.081

In Figure 3, the structural value t values of individual housing satisfaction are given. Accordingly, the t value of the "Socioeconomic Structure" variable (0.86) was found. This value. Since it is less than ± 1.96, the variable was not statistically significant at the 5% significance level. Other variables; "Demographic Structure" (3.25), "Housing Location" (13.93), "Housing Environment" 10.69, "Housing Architecture" (14.02) and "Housing Characteristics" (17.22) were statistically significant at 5% significance level.

Figure 3. Individual housing satisfaction structural model *t* values



Structural model results show that there is a high level of positive relationship between the "intrinsic latent variables" and "Individual Housing Satisfaction" except "Socioeconomic Structure". The “Demographic Structure” variable has a low-level effect ($\gamma = 0.19$; $t = 3.25$) on housing satisfaction. The most important observed variables of the “Demographic Structure” variable are; "Child - Number of children" and "Age - Age of the participant".

The “HL - Housing Location” variable affects positively high levels ($\gamma = 0.83$; $t = 13.93$) on housing satisfaction. The most important observed variables of the inner latent variable are; “HP2 - Accessibility to the center is important.” and "HP3 - Job accessibility is important." found to be.

The variable "ENQ - Housing Environment" has a very high positive effect ($\gamma = 0.90$; $t = 10.69$) on housing satisfaction. The most important observed variables of the “ENQ - Housing Environment” internal latent variable; “EQ6 - It is important to have a health center and hospital close to the residence.” and "EQ7 - It is important to have public transport stops." found to be.

The variable "HOQ - Residential Architecture" has a very high positive effect ($\gamma = 0.95$; $t = 14.02$) on the housing satisfaction. This internal variable makes the biggest impact on housing satisfaction. The most important observed variables of the "HOQ - Housing Architecture" internal latency variable; “HQ3 - Disabled entrance and elevator are important.” and “HQ4 - The quality of the building and decoration material is important.” found to be.

The variable "HOF - Housing Characteristics " has a very high positive effect ($\gamma = 0.90$; $t = 17.22$) on housing satisfaction. The most important observed variables of the "HOF - Housing Characteristics" internal latency variable; “HF1 - Large kitchen is important.” and “HF2 - Wide balcony is important.” found to be.

The “SES - Socioeconomic Structure” intrinsic latent variable ($\gamma = 0.07$; $t = 0.86$) does not have an impact on home satisfaction. Since the t value of the variable (0.86) is less than $\pm$ 1.96, it was found statistically insignificant within the 95% confidence limits.

The fit indices show whether the theoretical structure is verified by the data set (Bentler & Yuan, 1999). Many fit indexes are used for model fit test. In general, it is necessary for the compliance to be less than 0.10 of the mean square error of Approximation (RMSEA). Yet another criterion; (X^2 / DF) Chi-square / degrees of freedom. The (X^2 / DF) coefficient must contain a value less than 5. Other fit criteria are Goodness of Fit Index (GFI), Adjusted Goodness of Fit Index (AGFI), Comparative Fit Index (CFI), Relative Fit Index (RFI), Incremental Fit Index (IFI), Normed Fit Index (NFI) (İlhan & Çetin, 2014). The fact that these index values are close to 1 indicate that the compatibility between the data and the model is perfect, and zero represents the incompatibility (Yılmaz, 2005). In this study, the values related to these criteria were found close to 1. This situation shows the compatibility of the model and the data set. The fit indices of the structural model are given in Table 3 below.

Table 5. Fit indices of the structural model

Fit index	Values
Goodness of Fit Index (GFI)	0.89
Adjusted Goodness of Fit Index (AGFI)	0.85
Normed Fit Index (NFI)	0.93
Non-normed Fit Index (NNFI)	0.95
Relative Fit Index (RFI)	0.92
Comparative Fit Index (CFI)	0.95
Incremental Fit Index (IFI)	0.95

Source: Original calculations

4. CONCLUSION AND DISCUSSION

Individual housing satisfaction is a multi-dimensional and relative concept that changes according to the perceptions and wishes of individuals, based on the meaning and importance attached to the residence. Housing satisfaction shows the extent to which the ideal residence that the owner or user lives with and the current residence he / she wants to live with. Satisfaction is a subjective situation assessment. Housing satisfaction is affected by factors as demographic and socioeconomic structure, the quality of the residential environment, the aesthetic appearance of the house and its surroundings, the presence and quality of the social and economic facilities around the housing, the distance of the residential area in the city to the city, the existence and proximity of businesses and facilities that can meet daily needs, neighborhood relations, collective The proximity of transportation vehicles and roads.

The study focuses on the satisfaction of individuals living in Erzincan city center from their residences. Many studies in the literature on housing satisfaction have been examined and the relationship between the demographic characteristics of the individuals, the environmental quality of the house, the area of use and architecture of the house and the satisfaction of the house has been investigated with a holistic approach. The study was limited to Erzincan city center. Individuals residing in Erzincan center have been accepted as the universe of the study. A survey was conducted with 383 samples and the horizontal cross section data obtained formed the analysis data.

Findings obtained showed the existence of many individual, environmental and social factors on housing satisfaction. Structural model results show that there is a high level of positive relationship between the "intrinsic latent variables" and "Individual Housing Satisfaction" except "Socioeconomic Structure". The findings showed that the “Demographic Structure” variable had a low positive effect (konut = 0.19; t = 3.25) on housing satisfaction. Among the observed variables, “number of children” and “age of individuals” are important factors in housing satisfaction. The positive effect of “HL – Housing Location” variable on housing satisfaction was found at high level ($\gamma = 0.83$; t = 13.93). The most important observed variables are found as “accessibility to the center” and “accessibility to work”. Again, it was found that the variable "ENQ - Housing Environment" has a very high positive effect ($\gamma = 0.90$; t = 10.69) on housing satisfaction. The most important observed variables of this latent variable

are “It is important to have a health center and hospital close to the residence” and “It is important to have public transport stops”.

“HOQ - Residential Architecture” makes the internal variable the greatest effect on the housing satisfaction. The most important observed variables of the variable are “Disabled entrance and elevator is important” and “Quality of building and decoration material is important”. Again, the variable "HOF – Housing Characteristics " has a very high positive effect ($\gamma = 0.90$; $t = 17.22$) on the satisfaction of the house. The most important observed variables of this latent variable are; “Large kitchen is important” and “Wide balcony is important”.

The “SES - Socioeconomic Structure” intrinsic latent variable ($\gamma = 0.07$; $t = 0.86$) does not have an impact on home satisfaction. Since the t value of the variable (0.86) is less than $\pm$ 1.96, it was found statistically insignificant within the 95% confidence limits.

Individuals live under the pressure of social, cognitive, psychological, natural and fictional environments. Many factors such as health, employment, housing, administrative structure and economic conditions are effective and dominant in evaluating quality of life or satisfaction. However, Winston Churchill's statement that " We shape our buildings; thereafter they shape us " emphasizes how housing affects an entire social life. Given that housing has an impact on the physical and mental health of individuals, family and community structure, aesthetic understanding of society, culture of living together and quality of life, this study provides guidance for all actors of the industry. In order to maintain and increase housing satisfaction, we develop and develop environmental and social quality standards, especially the house itself; it is necessary to be able to continue without reducing these standards. Individuals' expectations from housing and housing environment should be increased quantitatively and qualitatively.

When choosing new residential areas, areas close to the city center should be preferred, and architectural styles that are diverse, not uniform, suitable for the natural environment and topography should be used. Residences should be built in areas close to the city center and economic, sociocultural, psychological, educational and health needs of individuals should be taken into account. Health centers, places of worship, recreation areas, shopping centers, libraries, education centers, art centers, sports complexes, restaurants, cafeterias and tea gardens should be established in areas close to the residential building.

First of all, building and construction materials and techniques that will not endanger the life and property safety of individuals should be used and health and safety should never be compromised.

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